UNITED STATES PATENT AND TRADEMARK OFFICE

A

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/051,442	01/18/2002	Sundeep Chandhoke	5150-58200	3493

35690 7590 09/29/2005

MEYERTONS, HOOD, KIVLIN, KOWERT & GOETZEL, P.C.
P.O. BOX 398
AUSTIN, TX 78767-0398

EXAMINER	
HANNE, SARA M	

ART UNIT	PAPER NUMBER
2179	

DATE MAILED: 09/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/051,442	CHANDHOKE ET AL.	
	Examiner	Art Unit	
	Sara M. Hanne	2179	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 July 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-68* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-68* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to the amendment received on July 15, 2005. Claims 8, 42, 52, 57, 60, 65 and 68 have been amended. Claims 1-68 are pending in this application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 53-60 are rejected under 35 U.S.C. 102(e) as being anticipated by Blowers et al., US Patent 6298474, herinafter Blowers.

As in Claim 53, Blowers teaches a computer-implemented method, memory medium and system for creating a prototype that includes machine vision, and data acquisition (DAQ) functionality, the method comprising: displaying a graphical user interface (GUI) that provides GUI access to a set of operations (Col. 8, line 61 et seq.), wherein the set of operations includes, one or more machine vision operations, and one or more DAQ operations; receiving user input to the graphical user interface specifying a sequence of operations (Col. 4, lines 64-67), wherein the specified sequence of operations includes a machine vision operation, and a data acquisition operation (Col. 8, lines 9-19) and storing information representing the specified sequence of operations

in a data structure (Col. 13, lines 10-54), wherein the specified sequence of operations comprises the prototype (Figure 6 and corresponding text).

As in Claim 54, Blowers teaches accessing the information representing the sequence of operations to determine program instructions corresponding to operations in the sequence; and executing the program instructions (Col. 8, line 61 et seq.).

As in Claim 55, Blowers teaches receiving user input to the graphical user interface specifying the sequence of operations does not include receiving user input specifying programming language code to implement the sequence of operations (Col. 3, line 64 et seq.).

As in Claims 56-57, Blowers teaches wherein the prototype is operable to perform acquiring images, analyze the acquired images; and acquiring measurement data from a DAQ device (Col. 11, line 65 et seq.).

As in Claim 58, Blowers teaches the prototype is operable control an image acquisition device to acquire an image of the object; and control a data acquisition device to acquire measurement data of the object (Col. 11, line 65 et seq.).

As in Claim 59, Blowers teaches executing the sequence of operations by performing each operation in the sequence (Col. 4, line 64 et seq.).

As in Claim 60, Blowers teaches creating program instructions executable to perform the specified sequence of operations; wherein said performing the specified sequence of operations comprises executing the program instructions (Col. 2, line 47 et seq.) wherein the graphical program comprises a plurality of interconnected nodes ("developing a graphical, control flow structure such as a tree structure", Col. 3, lines

15-16) that visually indicate functionality of the graphical program (Col. 8, line 49 et seq.).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-52 and 61-68 rejected under 35 U.S.C. 103(a) as being unpatentable over Blowers et al., US Patent 6298474, herinafter Blowers, and further in view of Weinhofer, US Patent 6442442.

As in Claims 1, 37, 43-45 and 61, Blowers teaches a computer-implemented method, memory medium and system for creating a prototype that includes machine vision, and data acquisition (DAQ) functionality, the method comprising: displaying a graphical user interface (GUI) that provides GUI access to a set of operations (Col. 8, line 61 et seq.), wherein the set of operations includes, one or more machine vision operations, and one or more DAQ operations; receiving user input to the graphical user interface specifying a sequence of operations (Col. 4, lines 64-67), wherein the specified sequence of operations includes a machine vision operation, and a data acquisition operation (Col. 8, lines 9-19) and storing information representing the specified sequence of operations in a data structure (Col. 13, lines 10-54), wherein the specified sequence of operations comprises the prototype (Figure 6 and corresponding

text). While Blowers teaches machine vision and data acquisition operations controlled by a GUI through a user specified sequence of operations in a data structure, they fail to show the motion control functionality with a motion control operation as recited in the claims. In the same field of the invention, Weinhofer teaches a graphical interface for creating a prototype through a specified sequence of operations in a data structure similar to that of Blowers. In addition, Weinhofer further teaches motion control operation and functionality through graphical programming (Col. 3, line 63 et seq. and Fig. 3). It would have been obvious to one of ordinary skill in the art, having the teachings of Blowers and Weinhofer before him at the time the invention was made, to modify the machine vision and data acquisition operations and functionality controlled by a GUI through a user specified sequence of operations in a data structure taught by Blowers to include the motion control operation and functionality of Weinhofer, in order to obtain a graphical programming interface for machine vision, data acquisition and motion control. One would have been motivated to make such a combination because an all-purpose graphical automotive controller would have been obtained, as taught by Weinhofer.

As in Claims 2, 38, 46 and 62, Blowers teaches accessing the information representing the sequence of operations to determine program instructions corresponding to operations in the sequence; and executing the program instructions (Col. 8, line 61 et seq.).

As in Claims 3 and 39, Blowers teaches receiving user input to the graphical user interface specifying parameter values for one or more operations in the sequence

wherein storing information representing the specified sequence of operations comprises storing the parameter values; wherein the method further comprises executing software routines corresponding to operations in the sequence, wherein executing comprises passing the parameter values to the software routines (Col. 9, line 7 et seq.).

As in Claims 4 and 40, Blowers teaches the information does not comprise programming language code (Col. 3, line 64 et seq.).

As in Claims 5, 41, 47 and 63, Blowers teaches receiving user input to the graphical user interface specifying the sequence of operations does not include receiving user input specifying programming language code to implement the sequence of operations (Col. 3, line 64 et seq.).

As in Claims 6-8, 30, 42, 48-49, 64-65, Blowers teaches wherein the prototype is operable to perform acquiring images, analyze the acquired images; and acquiring measurement data from a DAQ device (Col. 11, line 65 et seq. and Caliper tool 63). While Blowers teaches machine vision and data acquisition operations controlled by a GUI through a user specified sequence of operations in a data structure, they fail to show the motion control functionality with a motion control operation as recited in the claims. In the same field of the invention, Weinhofer teaches a graphical interface for creating a prototype through a specified sequence of operations in a data structure similar to that of Blowers. In addition, Weinhofer further teaches motion control operation and functionality through graphical programming (Col. 3, line 63 et seq. and Fig. 3). It would have been obvious to one of ordinary skill in the art, having the

teachings of Blowers and Weinhofer before him at the time the invention was made, to modify the machine vision and data acquisition operations and functionality controlled by a GUI through a user specified sequence of operations in a data structure taught by Blowers to include the motion control operation and functionality of Weinhofer, in order to obtain a graphical programming interface for machine vision, data acquisition and motion control. One would have been motivated to make such a combination because an all-purpose graphical automotive controller would have been obtained, as taught by Weinhofer.

As in Claims 9, 36, 50 and 66, wherein the prototype is operable control an image acquisition device to acquire an image of the object; and control a data acquisition device to acquire measurement data of the object (Col. 11, line 65 et seq.). While Blowers teaches machine vision and data acquisition operations controlled by a GUI through a user specified sequence of operations in a data structure, they fail to show the motion control functionality with a motion control operation to move an object as recited in the claims. In the same field of the invention, Weinhofer teaches a graphical interface for creating a prototype through a specified sequence of operations in a data structure similar to that of Blowers. In addition, Weinhofer further teaches motion control operation and functionality to move an object through graphical programming (Col. 3, line 63 et seq. and Fig. 3). It would have been obvious to one of ordinary skill in the art, having the teachings of Blowers and Weinhofer before him at the time the invention was made, to modify the machine vision and data acquisition operations and functionality controlled by a GUI through a user specified sequence of

operations in a data structure taught by Blowers to include the motion control operation and functionality of Weinhofer, in order to obtain a graphical programming interface for machine vision, data acquisition and motion control. One would have been motivated to make such a combination because an all-purpose graphical automotive controller would have been obtained, as taught by Weinhofer.

As in Claims 10, 51 and 67, Blowers teaches executing the sequence of operations by performing each operation in the sequence (Col. 4, line 64 et seq.).

As in Claims 11, 52 and 68, Blowers teaches creating program instructions executable to perform the specified sequence of operations; wherein said performing the specified sequence of operations comprises executing the program instructions (Col. 2, line 47 et seq.), wherein the graphical program comprises a plurality of interconnected nodes ("developing a graphical, control flow structure such as a tree structure", Col. 3, lines 15-16) that visually indicate functionality of the graphical program (Col. 8, line 49 et seq.).

As in Claim 12, Blowers teaches receiving user input to the graphical user interface for configuring operations in the sequence; wherein, for each operation, said configuring the operation affects an action which the operation is operable to perform (Col. 9, lines 1-10, Col. 11, line 15).

As in Claim 13, Blowers teaches wherein receiving user input to the graphical user interface for configuring one or more of the operations in the sequence does not include receiving user input specifying programming language code to configure the operations (Col. 3, lines 64-65).

As in Claim 14, Blowers teaches for each operation to be configured, displaying a graphical panel including graphical user interface elements for setting properties of the operation and receiving user input to the graphical panel to set one or more properties of the operation (Figures 5-7 with corresponding text).

As in Claim 15, Blowers teaches the graphical panel is automatically displayed in response to adding the operation to the sequence (Col. 9, line 7 et seq. and Col. 12, lines 8-10).

As in Claim 16, Blowers teaches receiving user input requesting to configure a first operation, and displaying a graphical panel for configuring the first operation in response to the request (Col. 8, line 61 et seq.).

As in Claim 17, Blowers teaches the graphical user interface includes an area which visually represents the operations in the sequence (Figure 7 and corresponding text); wherein the method further comprises: for each operation added to the sequence, updating the area usually representing the operations in the sequence to illustrate the added operation (simple drag-drop functionality, Col. 8, line 61 et seq.).

As in Claim 18, Blowers teaches the area visually representing the operations in the sequence displays icons (Figure 7 and corresponding text), wherein each icon visually indicates one of the operations in the Sequence (Col. 8, lines 64-66); wherein said updating the area visually representing the operations in the sequence to illustrate the added operation comprises displaying a new icon to visually indicate the added operation (simple drag-drop functionality, Col. 8, line 61 et seq.).

As in Claim 19, Blowers teaches the graphical user interface displays buttons, wherein each button is operable to add a new operation to the sequence in response to user input; wherein said receiving user input to the graphical user interface specifying a desired sequence of operations comprises receiving user input to the plurality of buttons to create the sequence of operations (Col. 12, lines 48-52 and Figure 5-7 with corresponding text).

As in Claim 20, While Blowers teaches machine vision and data acquisition operations controlled by a GUI through a user specified sequence of operations in a data structure, they fail to show the motion control functionality with a motion control operation as recited in the claims. In the same field of the invention, Weinhofer teaches a graphical interface for creating a prototype through a specified sequence of operations in a data structure similar to that of Blowers. In addition, Weinhofer further teaches motion control operation and functionality through graphical programming (Col. 3, line 63 et seq. and Fig. 3) including a straight line move operation (Col. 6, lines 44 et seq.). It would have been obvious to one of ordinary skill in the art, having the teachings of Blowers and Weinhofer before him at the time the invention was made, to modify the machine vision and data acquisition operations and functionality controlled by a GUI through a user specified sequence of operations in a data structure taught by Blowers to include the motion control operation and functionality including a straight line move operation of Weinhofer, in order to obtain a graphical programming interface for machine vision, data acquisition and motion control including a straight line move operation. One would have been motivated to make such a combination because an

all-purpose graphical automotive controller would have been obtained, as taught by Weinhofer.

As in Claim 21, While Blowers teaches machine vision and data acquisition operations controlled by a GUI through a user specified sequence of operations in a data structure, they fail to show the sequence includes a motion control operation, and the method further comprises displaying a view of the motion control performed by the motion control operations in the sequence on the graphical user interface, wherein the view graphically previews the cumulative movement specified by the motion control operations in the sequence as recited in the claims. In the same field of the invention, Weinhofer teaches a graphical interface for creating a prototype through a specified sequence of operations in a data structure similar to that of Blowers. In addition, Weinhofer further teaches the sequence includes a motion control operation (Col. 6, lines 39-41), and the method further comprises displaying a view of the motion control performed by the motion control operations in the sequence on the graphical user interface (Col. 3, line 63 et seq.), wherein the view graphically previews the cumulative movement specified by the motion control operations in the sequence (Fig. 3 and corresponding text). It would have been obvious to one of ordinary skill in the art, having the teachings of Blowers and Weinhofer before him at the time the invention was made, to modify the machine vision and data acquisition operations and functionality controlled by a GUI through a user specified sequence of operations in a data structure taught by Blowers to include the motion control operation and functionality including a straight line move operation of Weinhofer, in order to obtain a graphical programming

interface for machine vision, data acquisition and motion control including a straight line move operation. One would have been motivated to make such a combination because an all-purpose graphical automotive controller would have been obtained, as taught by Weinhofer.

As in Claim 22, Blowers teaches a two-dimensional position view for viewing a two-dimensional display of position data of the sequence in one or more of an XY, YZ, or ZX plane(Col. 8, lines 10-24).

As in Claim 23, Blowers teaches a three-dimensional position view for viewing a three-dimensional display of position data of the sequence (Col. 8, lines 10-24).

As in Claim 24, Blowers teaches programmatically generating a graphical program operable to perform the specified sequence of operations; and executing the graphical program to perform the specified sequence of operations (Col. 8, line 61 et seq.).

As in Claim 25, Blowers teaches the graphical program comprises interconnected nodes that visually indicate functionality of the graphical program (Col. 3, lines 14-35 and Figure 7 with corresponding text).

As in Claim 26, Blowers teaches a graphical data flow program (Col. 3, lines 14-35 and Col. 11, line 15).

As in Claim 27, Blowers teaches programmatically generating a text-based program operable to perform the specifed sequence of operations; and executing the text-based program to perform the specifed sequence of operations (Col. 8, line 61 et seq.).

As in Claim 28, Blowers teaches receiving a request from a computer program to execute the specified sequence of operations, wherein the computer program was not used to create the sequence of motion control operations (Col. 12, lines 46-47) and executing the specified sequence of operations in response to the request (Col. 11, lines 58-61).

As in Claim 29, Blowers teaches programmatically converting the sequence of operations to a format usable for configuring an embedded device to perform the sequence of operations and configuring the embedded device to perform the sequence of operations using the format (Col. 2, line 47 et seq.).

As in Claims 31 and 33, Blowers teaches the information does not comprise programming language code and receiving user input to the graphical user interface specifying the sequence of operations does not include receiving user input specifying programming language code to implement the sequence of operations (Col. 3, line 64 et seq.).

As in Claim 32, Blowers teaches storing information representing the specified sequence of operations in a data structure, wherein the specified sequence of operations comprises the prototype (See Claim 1 rejection supra).

As in Claim 34, Blowers teaches accessing the information representing the sequence of operations to determine program instructions corresponding to operations in the sequence and executing the program instructions (Col. 8, line 61 et seq.).

As in Claim 35, Blowers teaches receiving user input to the graphical user interface specifying parameter values for one or more operations in the sequence

wherein storing information representing the specified sequence of operations comprises storing the parameter values; wherein the method further comprises executing software routines corresponding to operations in the sequence, wherein executing comprises passing the parameter values to the software routines (Col. 9, line 7 et seq.).

Response to Arguments

Applicant's arguments filed 7/5/05 have been fully considered but they are not persuasive. In response to the arguments that Blowers fails to teach DAQ functionality and a GUI with a DAQ operation, the examiner disagrees. Data Acquisition does not automatically imply measurement, it is only receiving information, in which case a receiving input images from the cameras or any other data is data acquisition. Furthermore, the applicants claim that Blowers fails to teach "a measurement application involving data acquisition from a DAQ device", pg. 19, lines 2-3 of the submitted remarks. This is clearly shown by Blowers starting Col. 11, line 65. Blowers also teaches the Caliper tool 63, which finds edges used to calculate measurements which can be seen as a DAQ operation. The input images are acquired from the DAQ device, or camera, and then the measurement application takes measurements during image analysis.

In response to applicant's argument that Blowers and Weinhofer are nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem

with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Blowers and Weinhofer both acquire data and control systems via a sequential programming method and therefore are both in the field of the applicant's endeavor.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Weinhofer explains how motion controllers are part of many industrial control systems including programmable controller systems (Col. 1, line 48). Blowers teaches a programmable controller system. Weinhofer further explains how motion control systems have become more complex, and that in order to make the system more flexible, it would be advantageous to use something other than a sequential programming language, (Col. 2, line 57- Col. 3, line 25) like a sequential program as taught by both Blowers (Col. 4, line 65 et seq.) and Weinhofer (Col. 6, line 64).

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon

hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In response to the applicant's argument that Weinhofer fails to teach "one or more views of motion control performed by the motion control operations in a sequence are displayed on a graphical user interface, where the one or more views provide a graphical preview of the cumulative movement specified by the motion control operations", the examiner disagrees. The icons of Weinhofer graphically represent a preview of movement that the operation will carry out (Col. 4, lines 11-15).

In response to the applicant's arguments regarding Claim 29, the examiner disagrees. The user performs graphically sequencing instructions and machine vision tasks through the interface which must be converted into code in order to be carried out.

Conclusion

The prior art made of record on form PTO-892 and not relied upon is considered pertinent to applicant's disclosure. Applicant is required under 37 C.F.R. § 1.111(c) to consider these references fully when responding to this action. The documents cited therein teach similar motion control, machine vision, and data acquisition programming interfaces.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sara M Hanne whose telephone number is (571) 272-4135. The examiner can normally be reached on M-F 7:30am-4:00pm, off on alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather R Herndon can be reached on (571) 272-4136. The fax phone

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

smh

WEILUN LO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100